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APR 24 2008

Application No.: 10/565,994

Docket No.: JCLA19238

AMENDMENTIn The Claims:

Please amend the claims as follows:

1. (currently amended) A fixer for a fiber bragg grating sensor $[[S]]$ to measure a strain of an object to be measured, the fixer including:

a pair of fixing pieces $[[3]]$ for securing the fiber bragg grating sensor $[[S]]$ to the object, wherein each of the fixing pieces $[[3]]$ has a sensor holding groove $[[3b]]$ at a bottom surface of the fixing piece, and a tube receiving portion $[[3a]]$ protruded from one side of the fixing piece, which communicates with the sensor holding groove $[[3b]]$, wherein each fixing piece $[[3]]$ with the tube receiving portion $[[3a]]$ is an integrate structure in assembly for measuring the strain of the object; and

a tube $[[2]]$ enclosing the fiber bragg grating sensor $[[S]]$, disposed between the pair of fixing pieces $[[3]]$, such that both ends of the tube $[[2]]$ are detachably secured to each of the tube receiving portions $[[3a]]$ of the fixing pieces $[[3]]$ by a fastening member $[[4]]$,

wherein the tube $[[2]]$ is not directly fixed to a surface of the object to be measured; and the fiber bragg grating sensor $[[S]]$ is inserted into the tube $[[2]]$, and both ends of the fiber bragg grating sensor $[[S]]$ are firmly secured to the sensor holding groove $[[3b]]$ of the fixing piece $[[3]]$ by an adhesive $[[F]]$, and each fixing piece $[[3]]$ with the tube receiving portion $[[3a]]$ is a single structural body.

2. (currently amended) The fixer as claimed in claim 1, further comprising a cover 6 for closing the sensor holding groove $[[3b]]$ of the fixing piece $[[3]]$.

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3. (previously presented) The fixer as claimed in claim 1, wherein each of the fixing pieces includes the tube receiving portion protruded from each side of the fixing pieces, a threaded hole is formed on an upper portion of the tube receiving portion for exposing a side surface of the tube, and a fastening bolt is threadedly engaged with the threaded hole for selectively compressing and fastening the tube from the side surface through the thread hole.
4. (currently amended) The fixer as claimed in claim 1, wherein the sensor holding groove **[[3b]]** is formed with at least one anti-slip groove **[[3e]]** at an inner side thereof, so that when the adhesive **[[F]]** filled in the sensor holding groove is hardened, it prevents a clearance form being produced in the sensor holding groove **[[3b]]** due to a coefficient of linear expansion between the fixing piece **[[3]]** and the adhesive **[[F]]**.
5. (currently amended) The fixer as claimed in claim 1, further comprising a fixing plate 7 attached to the object to be measured, so that the fixing piece **[[3]]** is detachably secured to the fixing plate **[[7]]** of the object by a fastening member **[[5]]**.
6. (currently amended) The fixer as claimed in claim 1, wherein the tube **[[2]]** inserted into the tube receiving portion **[[3a]]** is provided at both ends thereof with a tap **[[8]]** to easily prevent a rotation of the tube and maintain a horizontal state thereof.

Claim 7. (canceled)

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8. (currently amended) The fixer as claimed in claim 1, wherein the pair of fixing pieces [[3]] is to be fixed on the surface of the object while the tube [[2]] is not fixed to the surface of the object.

9. (currently amended) A fixer for a fiber bragg grating sensor [[S]] to measure a strain of an object to be measured, the fixer including:

a pair of fixing pieces [[3]] for securing the fiber bragg grating sensor [[S]] to the object, wherein each of the fixing pieces [[3]] has a sensor holding groove [[3b]] at a bottom surface of the fixing piece, and a tube receiving portion [[3a]] protruded from one side of the fixing piece, which communicates with the sensor holding groove [[3b]], wherein each fixing piece [[3]] with the tube receiving portion [[3a]] is an integrate structure in assembly for measuring the strain of the object; and

a tube [[2]] enclosing the fiber bragg grating sensor [[S]], disposed between the pair of fixing pieces [[3]], such that both ends of the tube [[2]] are detachably secured to each of the tube receiving portions [[3a]] of the fixing pieces [[3]] by a fastening member [[4]],

wherein the tube [[2]] is not directly fixed to a surface of the object to be measured; and the fiber bragg grating sensor [[S]] is inserted into the tube [[2]], and both ends of the fiber bragg grating sensor [[S]] are firmly secured to the sensor holding groove [[3b]] of the fixing piece [[3]] by an adhesive [[F]], and the fastening member fixes the tube [[2]] but not change a tension condition of the fiber bragg grating sensor [[S]].

10. (currently amended) The fixer as claimed in claim 9, further comprising a cover 6 for closing the sensor holding groove [[3b]] of the fixing piece [[3]].

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11. (previously presented) The fixer as claimed in claim 9, wherein each of the fixing pieces includes the tube receiving portion protruded from each side of the fixing pieces, a threaded hole is formed on an upper portion of the tube receiving portion for exposing a side surface of the tube, and a fastening bolt is threadedly engaged with the threaded hole for selectively compressing and fastening the tube from the side surface through the thread hole.
12. (currently amended) The fixer as claimed in claim 9, wherein the sensor holding groove **[[3b]]** is formed with at least one anti-slip groove **[[3e]]** at an inner side thereof, so that when the adhesive **[[F]]** filled in the sensor holding groove is hardened, it prevents a clearance from being produced in the sensor holding groove **[[3b]]** due to a coefficient of linear expansion between the fixing piece **[[3]]** and the adhesive **[[F]]**.
13. (currently amended) The fixer as claimed in claim 9, further comprising a fixing plate **[[7]]** attached to the object to be measured, so that the fixing piece **[[3]]** is detachably secured to the fixing plate **[[7]]** of the object by a fastening member **[[5]]**.
14. (currently amended) The fixer as claimed in claim 9, wherein the tube **[[2]]** inserted into the tube receiving portion **[[3a]]** is provided at both ends thereof with a tap **[[8]]** to easily prevent a rotation of the tube and maintain a horizontal state thereof.
15. (currently amended) The fixer as claimed in claim 9, wherein the pair of fixing pieces **[[3]]** is to be fixed on the surface of the object while the tube **[[2]]** is not fixed to the surface of the object.